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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,360	09/30/2003	Noriyuki Sai	Q77773	4355
23373	7590	09/03/2008	EXAMINER	
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2100 PENNSYLVANIA AVENUE, N.W.				
SUITE 800			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20037			2625	
			MAIL DATE	DELIVERY MODE
			09/03/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/673,360	SAI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	HILINA S. KASSA	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 July 2008.  
 2a) This action is **FINAL**.                  2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,4-6,8,9 and 11-14 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,4-6,8,9 and 11-14 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/18/2008 has been entered.

### ***Response to Arguments***

2. Applicant's arguments, filed on 07/18/2008, with respect to the rejection(s) of claim(s) 1, 4-6, 8-9 and 11-14 under Yoshihara et al. (US Patent Number 5,465,463) in and Fresk et al. (US Patent Number 6,618,161 B1) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Munakata et al. (US Patent Number 6,217,143). Claims 1, 4-6, 8-9 and 11-14 are pending.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshihara et al. (US Patent Number 5,465,463) and Munakata et al. (US Patent Number 6,217,143).

**(1) regarding claim 1:**

As shown in figures 1 and 2, Yoshihara et al. disclose a printing apparatus (**copier apparatus, figure 2; column 3, lines 58-59; note that a copier apparatus is considered as the printing apparatus as it discloses an image output unit**) comprising:

a scanner unit (**24, figure 3**) for reading an original image (**column 4, lines 20-24; note that the image reading unit comprises a scanner unit which reads an image original 23 figure 3**);

an instruction unit (**s2, figure 5**) for receiving an instruction from a user (**column 5, lines 40-43; note that the instruction unit is considered as the key that get depressed by the operator when image needs to be read**),

wherein a single instruction input through said instruction unit is for instruction said scanner unit to perform a reading operation of a single piece of said original image (**s3 reading image, figure 5; column 5, lines 40-44; note that amongst divided original image a single image gets read according to an instruction from the operator and the read image gets stored in bit-map memory**); and

a printer unit (**s11-s12, figure 5**) for printing said original image that has been read on a medium (**column 6, lines 25-31; note that according to operator's instruction, the read image that has been stored in the bit-map memory gets outputted or copied onto the recording paper**),

when printing at least a first original image and a second original image on a single medium (**column 8, lines 6-9; note that two original images are read and the two image get outputted on a recording medium in lines 56-62**), by laying out said first original image on a first print region of the single medium and said second original image on a second print region of said single medium (**fig. 10(1-5), column 8, lines 47-55; note that the two original images read are connected to be outputted in one single medium A3**).

Yoshihara et al. disclose all of the subject matter as described as above except for specifically teaching wherein, said printer unit starts printing, on said single medium, said first original image after the reading operation of said first original image regardless of whether the reading operation of said second original image has finished.

However, as shown in figure 10, Munakata et al. disclose wherein, said first original image after the reading operation of said first original image regardless of whether the reading operation of said second original image has finished (**column 12, line 56-column 13, line 10; note that the after reading the original image as also shown in figure 10, the image formation unit i.e. printer performs printing using the printing medium as the scanner reads images during image formation**).

Yoshihara et al. and Munakata et al. are combinable because they are from the same field of endeavor which is network printing and image processing. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to wherein, said printer unit starts printing, on said single medium, said first original image after the reading operation of said first original image regardless of whether the reading operation of said second original image has finished. The suggestion/motivation for doing so would have been to enhance the speed of the apparatus and to eliminate feeding error of print medium thereby obtaining a high-quality image (column 5, lines 24-30). Therefore, it would have been obvious to combine Yoshihara et al. with Munakata et al. to obtain the invention as specified in claim 1.

**(2) regarding claim 8:**

Yoshihara et al. further disclose a printing apparatus according to claim 1, wherein:

    said printing apparatus allows the number of said images that are to be printed on said single medium to be changed (**column 8, lines 51-62; note that the images that are read are outputted on a recording paper**); and

    printing is started after a predetermined number of times of said reading operations have been executed (**column 8, lines 24-29; note that all original images are read before printing is executed**), said predetermined number of times being set according to the number of images to be printed on said single piece of medium

(column 8, lines 47-62; note that the images read are organized sequentially and a print medium A1 is selected to output the images).

**(3) regarding claim 9:**

Yoshihara et al. further disclose a printing apparatus comprising:  
a scanner unit for reading an original image (**column 4, lines 20-24; note that the image reading unit comprises a scanner unit which reads an image original 23 figure 3**);  
an instruction unit (**s2, figure 5**) for receiving an instruction from a user (**column 5, lines 40-43; note that the instruction unit is considered as the key that get depressed by the operator when image needs to be read**),

wherein a single instruction input through said instruction unit is for instruction said scanner unit to perform a reading operation of a single piece of said original image (**s3 reading image, figure 5; column 5, lines 40-44; note that amongst divided original image a single image gets read according to an instruction from the operator and the read image gets stored in bit-map memory**); and

a printer unit (**s11-s12, figure 5**) for printing said original image that has been read on a medium (**column 6, lines 25-31; note that according to operator's instruction, the read image that has been stored in the bit-map memory gets outputted or copied onto the recording paper**),

wherein, when printing at least a first original image, a second original image, and a third original image on a single medium by laying out said first original image on a

first print region of said single medium the second original image on a second print region of said single medium, and the third original image on a third print region of said single medium (**fig. 12(2-5) column 10, lines 1-7; note that all the images get read and all the images get outputted in one single medium A3**); and when in a fourth print region of said single medium corresponding to a first scan movement, a part of said first print region and a part of said second print region are both included and a part of said third print region is not included (**fig. 17 (a-d) column 12, line 52-column 13, line 7; note that the images read are processed to be outputted and the character comparison unit compares an frame edge portion of the data where the it is present i.e. considered as the print region without the data**), then said printer unit starts printing, on said medium (**s52, figure 19**),

Yoshihara et al. disclose all of the subject matter as described as above except for specifically teaching said first original image and said second original image after said reading operations of said first original image and said second original image regardless of whether the reading operation of said third original image has finished.

However, as shown in figure 10, Munakata et al. disclose wherein, said first original image and said second original image after said reading operations of said first original image and said second original image regardless of whether the reading operation of said third original image has finished (**column 12, line 56-column 13, line 10; note that the after reading the original image as also shown in figure 10, the image formation unit i.e. printer performs printing using the printing medium as the scanner reads images during image formation**).

Yoshihara et al. and Munakata et al. are combinable because they are from the same field of endeavor which is network printing and image processing. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to wherein, said printer unit starts printing, on said single medium, said first original image and said second original image after said reading operations of said first original image and said second original image regardless of whether the reading operation of said third original image has finished. The suggestion/motivation for doing so would have been to enhance the speed of the apparatus and to eliminate feeding error of print medium thereby obtaining a high-quality image (column 5, lines 24-30). Therefore, it would have been obvious to combine Yoshihara et al. with Munakata et al. to obtain the invention as specified in claim 9.

5. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshihara et al. (US Patent Number 5,465,463) and Munakata et al. (US Patent Number 6,217,143) as applied in claim 1 and further in view of Okada (US Patent Number 6,711,626 B1).

**(1) regarding claim 4:**

Yoshihara et al. further disclose a printing apparatus according to claim 1, wherein: said printer unit performs printing by repeating scan movement of a head with respect to said medium (**column 20, lines 36-40; note that subsequent scanning is performed by the printer unit**) and carrying of said medium in a direction orthogonal to a direction of said scan movement (**column 16, lines 39-50; note that the scanning is**

**made perpendicular to the plan of the recording paper); and a third print region on the single medium corresponding to a scan movement which is to be performed thereafter includes a part of said first print region (fig. 17 (a-d) column 12, line 52-column 13, line 7; note that the images read are processed to be outputted and the character comparison unit compares an frame edge portion of the data where the it is present i.e. considered as the print region without the data).**

Yoshihara et al. disclose all of the subject matter as described as above except for specifically teaching when printing of said first original image has started before the reading operation of said second original image has finished.

However, as shown in figure 10, Munakata et al. disclose when printing of said first original image has started before the reading operation of said second original image has finished (**column 12, line 56-column 13, line 10; note that the after reading the original image as also shown in figure 10, the image formation unit i.e. printer performs printing using the printing medium as the scanner reads images during image formation).**

Yoshihara et al. and Munakata et al. are combinable because they are from the same field of endeavor which is network printing and image processing. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to when printing of said first original image has started before the reading operation of said second original image has finished. The suggestion/motivation for doing so would have been to enhance the speed of the apparatus and to eliminate feeding error of print medium thereby obtaining a high-quality image (column 5, lines 24-30). Therefore, it

would have been obvious to combine Yoshihara et al. with Munakata et al. to obtain the invention as specified in claim 4.

Yoshihara et al. and Munakata et al. disclose all of the subject matter as described as above except for specifically teaching said single scan movement is put on hold.

However, Okada discloses said single scan movement is put on hold (**column 11, line 63-column 12, line 5; note that the scanning movement could be put on hold or standby state**).

Yoshihara et al., Munakata et al. and Okada are combinable because they are from the same field of endeavor i.e. network printing. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to have single scan movement on hold. The suggestion/motivation for doing so would have been in order to efficiently control the performance of the printing apparatus (column 1, lines 55-60). Therefore, it would have been obvious to combine Yoshihara et al., Munakata et al. with Okada to obtain the invention as specified in claim 4.

**(2) regarding claim 5:**

Yoshihara et al. disclose second image is read (**column 11, line 66-column 12, line 12; note that the second image gets read**) and printing is executed for said first image and said second image and said second original image is performed (**column 12, lines 15-19; note that address is assigned for the first and second images and in lines 36-40, the printer outputs the images**).

Yoshihara et al. and Munakata et al. all of the subject matter as described as above except for specifically teaching when said second image is read while said single scan movement is being put on hold, said single scan movement put on hold is executed for printing said first image and said second image.

However, Okada discloses when said second image is read while said single scan movement is being put on hold (**column 11, line 63-column 12, line 5; note that the scanning movement could be put on hold or standby state**), said single scan movement put on hold is executed for printing said first image and said second image (**column 12, lines 15-20; note that the printer performs copying**).

Yoshihara et al., Munakata et al. and Okada are combinable because they are from the same field of endeavor i.e. network printing. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art when said second image is read while said single scan movement is being put on hold, said single scan movement put on hold is executed for printing said first image and said second image. The suggestion/motivation for doing so would have been in order to efficiently control the performance of the printing apparatus (column 1, lines 55-60). Therefore, it would have been obvious to combine Yoshihara et al., Munakata et al. with Okada to obtain the invention as specified in claim 5.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshihara et al. (US Patent Number 5,465,463) and Munakata et al. (US Patent Number

6,217,143) and Okada (US Patent Number 6,711,626 B1) as applied in claim 4 above, and further in view of Miyake et al. (US Patent Number 4,872,035).

**(1) regarding claim 6:**

Yoshihara et al., Munakata et al. and Okada disclose all of the subject matter as described as above except for specifically teaching wherein when the printing apparatus receives an instruction to cancel the reading operation of said second image after said single scan movement is being put on hold, said single scan movement put on hold is executed and printing of said third print region of said first original image is performed.

However, Miyake et al. teaches an image forming apparatus wherein when the printing apparatus receives an instruction to cancel the reading operation of said second image (**52, figure 5-3; column 5, lines 30-32**), after said single scan movement is being put on hold, said single scan movement put on hold is executed and printing of said third print region of said first original image is performed (**column 5, lines 30-35**;  
**note that even if the stop key is pressed, the copier resumes printing after processing the cycle which already been scanned is executed**).

Yoshihara et al., Munakata et al. and Okada and Miyake et al. are combinable because they are from the same field of endeavor i.e. network printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art wherein when the printing apparatus receives an instruction to cancel the reading operation of said second image after said single scan movement is being put on hold, said single scan movement put on hold is executed and printing of said third print region of said first

original image is performed. The suggestion/motivation for doing so would have been for advance reliability. Therefore, it would have been obvious to combine Yoshihara et al., Munakata et al. and Okada with Miyake et al. to obtain the invention as specified in claim 6.

7. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshihara et al. (US Patent Number 5,465,463) in view of Fujii (Japanese Publication Number 2002-247382).

**(1) regarding claim 11:**

As shown in figures 1 and 2, Yoshihara et al. disclose a printing apparatus (**copier apparatus, figure 2; column 3, lines 58-59; note that a copier apparatus is considered as the printing apparatus as it discloses an image output unit**) comprising:

a scanner unit (**24, figure 3**) for reading an original image (**column 4, lines 20-24; note that the image reading unit comprises a scanner unit which reads an image original 23 figure 3**);

an instruction unit (**s2, figure 5**) for receiving an instruction from a user (**column 5, lines 40-43; note that the instruction unit is considered as the key that get depressed by the operator when image needs to be read**), and

wherein a single instruction input through said instruction unit is for instruction said scanner unit to perform a reading operation of a single piece of said original image

(**s3 reading image, figure 5; column 5, lines 40-44; note that amongst divided original image a single image gets read according to an instruction from the operator and the read image gets stored in bit-map memory**); and

a printer unit (**s11-s12, figure 5**) for printing said original image that has been read on a medium (**column 6, lines 25-31; note that according to operator's instruction, the read image that has been stored in the bit-map memory gets outputted or copied onto the recording paper**),

when printing at least a first original image and a second original image on a single medium (**column 8, lines 6-9; note that two original images are read and the two image get outputted on a recording medium in lines 56-62**), by laying out said first original image on a first print region of the single medium and said second original image on a second print region of said single medium (**fig. 10(1-5), column 8, lines 47-55; note that the two original images read are connected to be outputted in one single medium A3**).

Yoshihara et al. disclose all of the subject matter as described as above except for specifically teaching wherein each said instruction corresponds to one of a plurality of print modes; and said printer unit prints, on said single piece of medium, N pieces of the images according to respective corresponding said print modes.

However, Fujii discloses wherein each said instruction corresponds to one of a plurality of print modes (**paragraph [0004], lines 3-6; note that user sets the color or monochrome mode**); and said printer unit prints the first image in a print mode according to a first reading instruction of said first image and prints the second image in

a print mode according to a second reading instruction of said second image(**paragraph [0006], lines 2-6; note that the printing means processes the different modes.**)

Yoshihara et al. and Fujii are combinable because they are from the same field of endeavor, which is printing apparatus. At the time of the invention, it would have been obvious to a person of ordinary skill in the art wherein each said instruction corresponds to one of a plurality of print modes; and said printer unit prints, on said single piece of medium, N pieces of the images according to respective corresponding said print modes. The suggestion/motivation for doing so would have been in order to utilize efficient and versatile apparatus. Therefore, it would have been obvious to combine Yoshihara et al. with Fujii to obtain the invention as specified in claim 11.

**(2) regarding claim 12:**

Yoshihara et al. discloses all of the subject matter as described as above except for teaching wherein: wherein: said plurality of print modes include a monochrome print mode and a color print mode.

However, Fujii discloses wherein: said plurality of print modes include a monochrome print mode and a color print mode (**paragraph [0010], lines 1-8; note that the color or monochrome copy is utilized.**)

Yoshihara et al. and Fujii are combinable because they are from the same field of endeavor which is printing apparatus. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have monochrome and color print

mode. The suggestion/motivation for doing so would have been in order to utilize efficient and versatile apparatus. Therefore, it would have been obvious to combine Yoshihara et al. with Fujii to obtain the invention as specified in claim 12.

8. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshihara et al. (US Patent Number 5,465,463) and Fujii (Japanese Publication Number 2002-247382) as applied in claim 11, and further in view of Fresk et al. (US Patent Number 6,618,161 B1).

**(1) regarding claim 13:**

Yoshihara et al. and Fujii disclose all of the subject matter as described as above except for teaching wherein: said plurality of print modes include a low-resolution print mode a high-resolution print mode.

However, Fresk et al. disclose said plurality of print modes include a low-resolution print mode a high-resolution print mode (**column 4, lines 1-6; note that the copier is a multi-resolution capable engine**).

Yoshihara et al., Fujii and Fresk et al. are combinable because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have quality modes that differ in print resolution. The suggestion/motivation for doing so would have been in order to acquire better quality and versatility. Therefore, it would have been obvious to combine Yoshihara et al. and Fujii with Fresk et al. to obtain the invention as specified in claim 13.

**(2) regarding claim 14:**

Yoshihara et al. and Fujii disclose all of the subject matter as described as above except for teaching wherein said instruction unit has instruction buttons corresponding respectively to said plurality of print modes.

However, Fresk et al. disclose wherein said instruction unit has instruction buttons corresponding respectively to said plurality of print modes (**column 8, lines 59-61; note that user utilizes buttons to make selection**).

Yoshihara et al., Fujii and Fresk et al. are combinable because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art wherein said instruction unit has instruction buttons corresponding respectively to said plurality of print modes. The suggestion/motivation for doing so would have been in order to easily access desired selection. Therefore, it would have been obvious to combine Yoshihara et al. and Fujii with Fresk et al. to obtain the invention as specified in claim 14.

***Conclusion***

9. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Hilina Kassa whose telephone number is (571) 270-1676.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore could be reached at (571) 272- 7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hilina S Kassa/  
Examiner, Art Unit 2625  
August 29, 2008  
/King Y. Poon/  
Supervisory Patent Examiner, Art Unit 2625